

HEDYOTIS GALEOTTII (RUBIACEAE), NEW COMBINATION FOR A MEXICAN SPECIES

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ABSTRACT

Relationships, taxonomic position and nomenclature of *Hedyotis galeottii* are summarized.

KEY WORDS: *Hedyotis galeottii*, Rubiaceae, systematics, México.

Declieuxia galeottii Martens is here transferred to *Hedyotis* on the basis of morphology of the flowers, capsules, and seeds. *Manettia liebmannii* Standley is conspecific with *D. galeottii*.

***Hedyotis galeottii* (Martens) Terrell & Lorence, comb. nov.** Based on *Declieuxia galeottii* Martens, in Martens & Galeotti, Bull. Acad. Roy. Sci. Bruxelles 11:231. 1844. Holotype: MÉXICO, Oaxaca: Llano Verde, 3-7000 ft, April 1840, *H. Galeotti 2603* (BR!). Isotypes: labeled similarly and with same collection number, but BR collection dated March 184_, and US collection dated March 1841 (or 1847?); these were annotated, apparently by Hemsley, as *D. galeottiana* (BR!, US!).

Manettia liebmannii Standley, J. Washington Acad. Sci. 17:337-338. 1927. Holotype: MÉXICO. (presumably Oaxaca): Pelado, August 1842, *F.M. Liebmann 11485*, (C, fragment US 1315772!). Paratype: MÉXICO. (presumably Oaxaca): Cuesta de San Juan del Estado, *F.M. Liebmann 11487*, (C, fragment US 1315771!).

J.H. Kirkbride, Jr. (1976) in his revision of *Declieuxia* noted that *D. galeottii* Martens belonged with *Hedyotis* or related genera. At that time he informed Terrell of the misplacement of the species and transferred to him for study three type specimens lent to him by BR. Later, one of the two isotypes was permanently deposited at US, courtesy of Dr. André Lawalrée on Terrell's request.

The protologue is by Martens only, although both authors were cited in Index Kewensis. Presumably, Galeotti wanted to avoid naming the species

after himself. The protologue provided additional details about the source of *Declieuxia galeottii*: it grew in the forests and on rocky slopes of Llano Verde and Cerro del Malacate, near Rincón, at 3000-7000 ft in the eastern cordillera of Oaxaca. This area is in the Sierra de Juárez, about 40 km due northeast of the city of Oaxaca. In July, 1987, Stephen D. Koch and Terrell searched unsuccessfully for the species near Rincón, nor was it ever encountered by Lorence or other collectors at MEXU during several years of field work in the Sierra de Juárez.

The type specimens that came to Terrell on loan from BR were already designated as to holotype and isotype. We will continue to retain these designations; however, as noted above, the collection date for the holotype is April 1840, that for the isotype at BR is March 184_ (year blank), and that for the isotype at US is March 1841 (or 1847?). The date given in the protologue is March, year not given. All of the types have the same collection number, 2603. McVaugh (1978) discussed Galeotti's collections and noted inconsistencies in labeling; he listed 1840 as the last year of Galeotti's travels in México.

The type specimens of *Declieuxia galeottii* have mostly flower buds, and the corollas are not fully expanded. There are no seeds. The floral and vegetative morphology show similarities to *Hedyotis kingii* (Terrell) Nesom (*Houstonia kingii* Terrell), which has been collected in Oaxaca along or near route 175 about halfway between Oaxaca city and Tuxtepec in the Sierra de Juárez. We have no doubt that *H. kingii* and *D. galeottii* are congeneric. They are, however, distinct species, as shown by differences in floral morphology; seed differences are pointed out below.

Dr. Joan Nowicke examined the pollen of *Hedyotis kingii* (illustrated in Terrell, Lewis, Robinson, & Nowicke, 1986). After comparing it with *D. galeottii* pollen, she reported (in correspondence) that pollen grains of the two species are similar in the characteristics of the apertures.

Manettia species are scandent and have seeds that are strongly flattened and broadly winged with ornately lobed or erose margins. Standley's protologue stated that *M. liebmannii* was "apparently scandent;" however, we cannot find any basis for this opinion. Standley described the seeds as being immature, numerous, compressed, and narrowly winged. There are several seeds in the fragmentary type at US; they agree with Standley's description but are not like the seeds of *Manettia*. In addition, we found seeds in certain of the Veracruz specimens cited below. The seeds are with or without narrow, sometimes partial wings, or sometimes wings may have been present but have been damaged. Wing margins are entire. The seeds are rather similar to those of the Oaxacan species *Hedyotis zestosperma* (Robinson & Greenman) W.H. Lewis (*Houstonia zestosperma* (Robinson & Greenman) Terrell), which is probably related. The seeds of *Hedyotis kingii* are basically similar to those of *M. liebmannii*, but differ in being thicker, not winged, and somewhat polygonal-rounded in outline (Terrell, 1980).

Standley noted in his protologue that *Manettia liebmannii* differed from

other *Manettia* species in having small capsules and flowers, and that "by Hooker the plant was referred to *Hedyotis*." Standley added that the presence of wings on the seeds excluded it from the Oldenlandieae [=Hedyotideae]; however, we disagree with the last statement. In *Hedyotis zestosperma* and *H. intricata* Fosberg (*Houstonia fasciculata* A. Gray) the seeds have partial wings (Terrell, Lewis, Robinson, & Nowicke, 1986).

The type fragment in US of *Manettia liebmannii* consists of the upper part of the stem and an inflorescence. These and the more complete types of *Declieuxia galeottii* are similar in all characteristics. They also came from the same general geographic area: Pelado is near Llano Verde and San Juan del Estado, source of the paratype of *M. liebmannii*, is about 25-30 km north of the city of Oaxaca (communication from R. McVaugh). We believe *D. galeottii* and *M. liebmannii* to be conspecific; thus, *Hedyotis galeottii*, based on the older name, is the correct name.

Several recent collections closely resembling *Declieuxia galeottii* and *Manettia liebmannii* have been studied by both of us from the MEXU, XAL, and ENCB herbaria. These were collected in the Sierra Madre Oriental northeast and northwest of Xalapa, Veracruz, approximately 175 miles north of Llano Verde. These collections have internally densely short-villous corolla lobes. Although corollas of the types discussed previously were less hairy, Standley noted that *M. liebmannii* had the corolla lobes short-villous within. Pending further study we consider the Veracruz collections to represent *Hedyotis galeottii* rather than a new species. The Veracruz collections are as follows: Mun. de Alto Lucero: El Cerro la Cima, entre Plan de las Hayas y Tierra Blanca, 1600 m, *Castillo C. & Narave 2158* (XAL). Mun. de Atzalan: Cerro del Aguila, 850 m, 10 Sep 1982, *Ventura A. 19740* (ENCB); Alseeca, 950 m, 24 Mar 1975, *Ventura A. 11118* (ENCB); La Calavera, 1000 m, 27 Apr 1978, *Ventura A. 15232* (ENCB). Mun. de Naolinco: Naranjillo, 1250 m, 13 Nov 1976, *Ventura A. 13605* (ENCB). Mun. de Yecuatla: Santa Rita, 1450 m, 12 Feb 1973, *Ventura A. 7824* (ENCB); Loma Santa Rita, 1480 m, 12 Jan 1972, *Ventura A. 4764* (ENCB).

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